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on behalf of

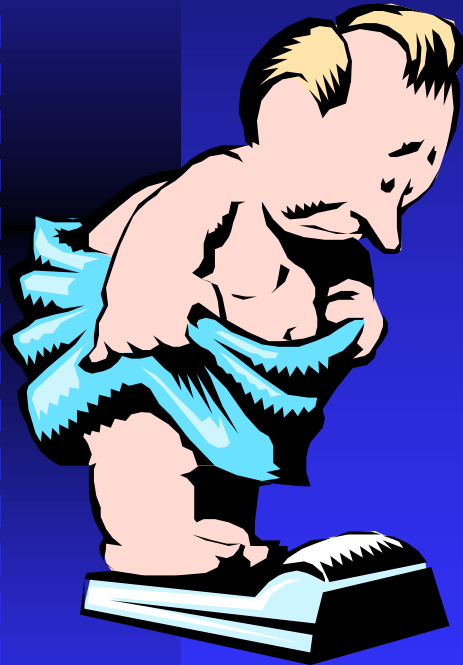
Faiz Foundation, Model Town, Lahore

03 September 2012

25th Interactive Session

Obesity and Diet Therapy

Obesity

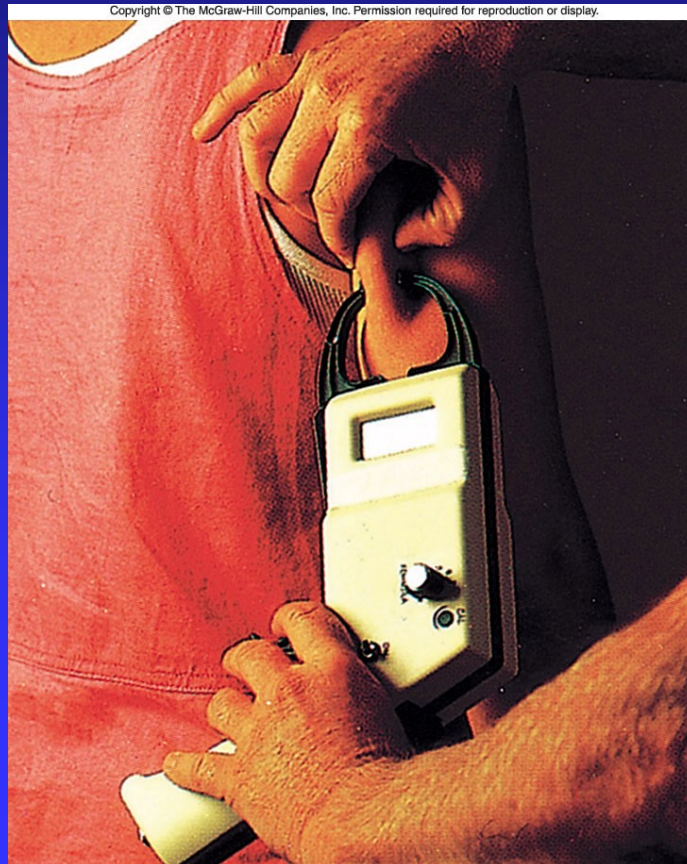


- Excessive amount of body fat
 - Women with $> 35\%$ body fat
 - Men with $> 25\%$ body fat
- Increased risk for health problems
- Are usually overweight, but can have healthy BMI and high % fat
- Measurements using calipers

Desirable % Body Fat

Men: 8-25%

Women 20-35%



Regional Distribution

The regional distribution of body fat affects risk factors for the heart disease and type 2 diabetes

Patterns of Body Fat Distribution

Abdominal
(Android)



Lower Body
(Gynoid)



Body Fat Distribution

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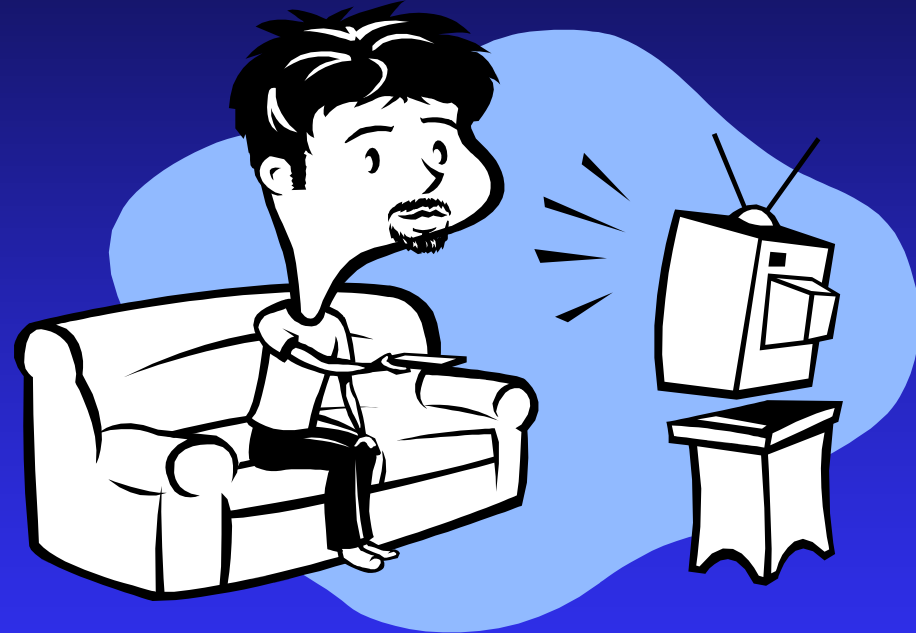


Lower-body obesity



Upper-body obesity

Causes of Obesity



Obesity tends to run in families

If both parents are normal weight – 10% chance of obesity in offspring

If one parent is obese – 40% chance. If both parents obese – 80% chance

Why We Eat More?

1. **Active**

Large portion sizes, frequent meals and snacks

2. **Passive**

Excessive intake of energy-dense foods

3. **Variety of options**

Greater variety of foods, greater the intake

4. **Sensory-specific satiety**

As foods are consumed they become less appealing

Major Causes of Death

#1 Smoking



#2 Obesity



Health Problems Associated with Excess Body Fat

- Surgical risk
- Lung (pulmonary) disease
- Sleep apnea
- HTN
- CVD
- Bone and joint disorders (gout, osteoarthritis)
- Type 2 diabetes
- Gallstones
- Cancers (breast, colon, pancreas, gallbladder)
- Infertility
- Pregnancy- difficult delivery
- Reduced agility
- Early death

Metabolic Syndrome Criteria*

Three or more of the following abnormalities:

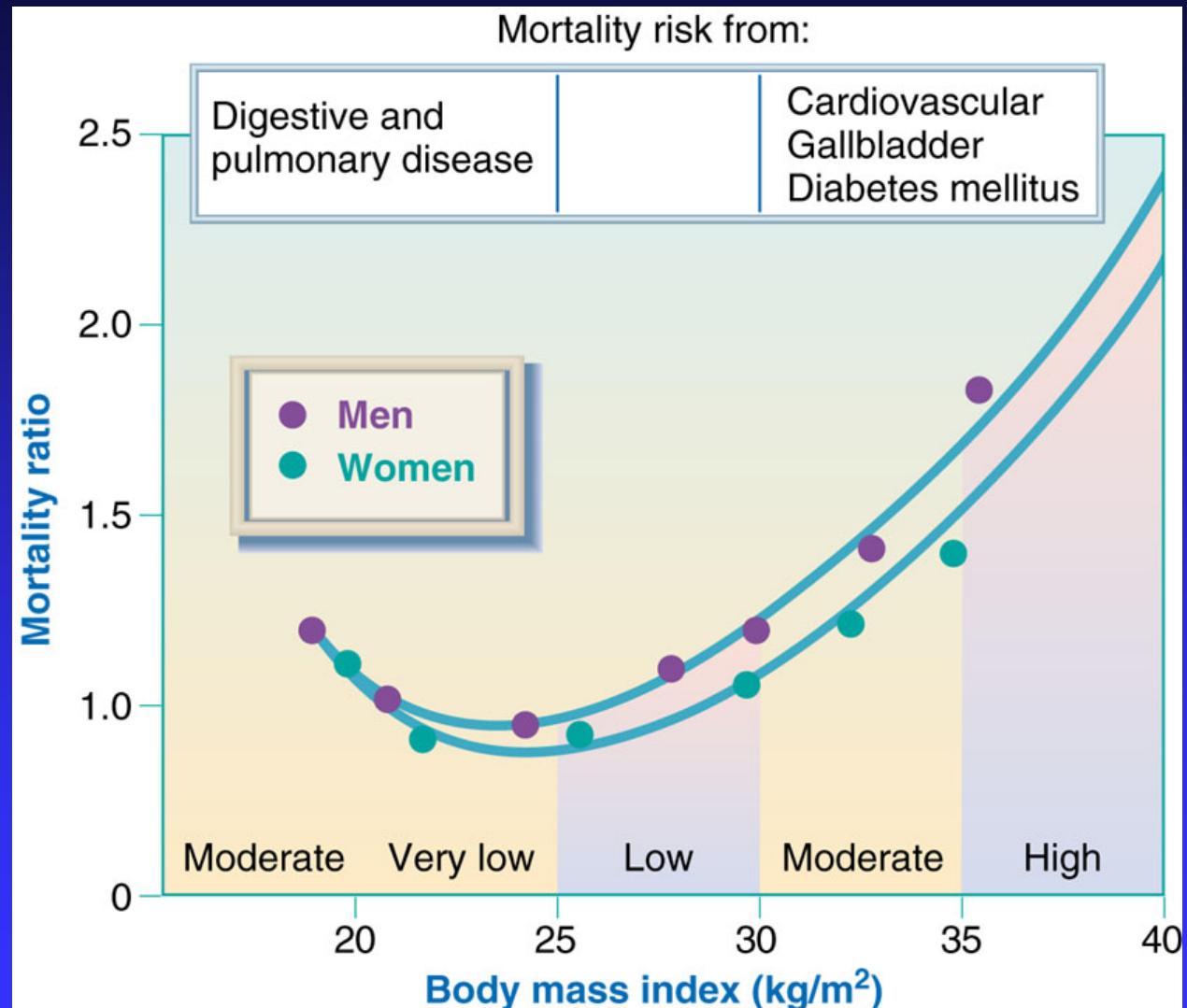
1. Waist circumference
 - Men >102 cm (40 inches)
 - Women > 88 cm (35 inches)
2. Serum triglycerides of at least 150 mg/dL
3. High density lipoprotein level <40 mg/dL in men and <50 mg/dL in women
4. Blood pressure $\geq 135/85$ mm/hg
5. Serum glucose ≥ 110 mg/dl

*ATP III Guidelines. National Cholesterol Education Program, 2001

BMI and Health

Below 18.5	Underweight
18.5 – 24.9	Normal
25.0 – 29.9	Overweight Monitor for risk
30.0 and Above	Obese Increased health risk
40.0 and above	Severely obese Major health risk

Body Mass Index and Mortality Risk



(Adapted from Bray GA, Gray DS, Obesity, part 1: Pathogenesis. West J Med 149:429, 1988; and Lew EA, Garfinkle L; Variations in mortality by weight among 750,000 men and women. J Clin Epidemiol 32:563, 1979.)

Dietary Guidelines



Rule 1:

Reduced Calorie Diets

- An individualized reduced calorie diet.
- Reducing dietary fat to cut 500 – 1000 kcal per day may result in a weight loss of 1 – 2 lbs per week.

Rule 2

Balanced Energy-Restricted Diet

- Should be relatively high in carbohydrate (50-55% of total kcals)
 - CHO sources should be fruits, vegetables, whole grains
- Include generous protein (15-25% of kcals) for increased satiety and to assure adequate supply
- Fat < 30% of kcals
- Increased fiber to improve satiety (NIH, 1998)

Rule 2 cont...

Balanced Energy-Restricted Diet

- High-sugar foods should be limited to limit excess energy (avoid alcohol)
- Use of non-nutritive sweeteners and fat replacements may improve the palatability of the diet
- Vitamins and mineral supplements may be needed in programs that provide <1200 kcals for women or 1800 kcals for men (NIH, 1998)

Rule 3

Nutrition Education

- Nutrition education should be individualized and included as part of the diet component of a comprehensive weight management program.
- Nutrition education (e.g. reading nutrition labels, recipe modification, cooking classes) increases knowledge and may lead to improved food choices.

Rule 4

Physical Activity

- At least 30 minutes or more of moderate intensity physical activity on most, and preferably, all days of the week, unless medically contraindicated.
- Physical activity contributes to weight loss, may decrease abdominal fat, and may help with maintenance of weight loss
- Other Benefits are Improved sense of well-being, Relief of boredom, Sense of control and Relief from depression

Last but not least

